

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/001130

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 F16H31/00 E21B19/083

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16H E21B E04G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 534 857 A (SAMUEL CREWE) 19 December 1950 (1950-12-19) column 3, line 70 - column 4, line 32; figures 1,8-10	1-4,9,10
Y	-----	11-13
Y	DE 15 50 374 A (LOHSE EISENBAU M) 18 December 1969 (1969-12-18) page 2, line 3 - line 27; figure 1	11
A	-----	10
Y	GB L24390A (RILEY, WILLIAM KING) 4 July 1912 (1912-07-04) the whole document	12,13
A	US 5 315 202 A (LASOTA LAURENCE) 24 May 1994 (1994-05-24) the whole document	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

13 July 2004

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20/07/2004

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2534857	A	19-12-1950	NONE	
DE 1550374	A	18-12-1969	DE 1550374 A1	18-12-1969
GB 191124390	A	04-07-1912	NONE	
US 5315202	A	24-05-1994	US 5148067 A	15-09-1992